AMENDMENTS TO THE SPECIFICATION

At page 14 replace equation (4) with:

$$\cancel{A(\varphi)=\left\{E_0+\sum_{n=1}^{\infty}E_n\cos\left(nS\varphi+\varepsilon n\right)+E_k\cos\left(k\varphi+\gamma_k\right)\right\}^2 \qquad (4)}$$

$$\underline{A(\varphi)=\left\{E_0+\sum_{m=1}^{\infty}E_m\cos\left(mS\varphi+\varepsilon_m\right)+E_k\cos\left(k\varphi+\gamma_k\right)\right\}^2 \qquad (4)}$$

At page 15 replace equation (5) with:

$$\cancel{A(\varphi)=\left\{E_0+\sum_{n=1}^{\infty}E_n\cos\left(nS\varphi+\varepsilon_n\right)\right\}^2}$$

$$\cancel{+2\left\{E_0+\sum_{n=1}^{\infty}E_n\cos\left(nS\varphi+\varepsilon_n\right)\right\}E_k\cos\left(k\varphi+\gamma_k\right)}$$

$$\cancel{+E_k^2\cos^2\left(k\varphi+\gamma_k\right)}$$

$$\cancel{=Y_0/2+\sum_{n=1}^{\infty}Y_{nS}\cos\left(nS\varphi+y_{nS}\right)}$$

$$\cancel{+2E_0E_k\cos\left(k\varphi+\gamma_k\right)}$$

$$\cancel{+2E_k\sum_{n=1}^{\infty}E_n\cos\left(nS\varphi+\varepsilon_n\right)\cos\left(k\varphi+\gamma_k\right)}$$

$$\cancel{+E_k^2\cos^2\left(k\varphi+\gamma_k\right)}$$

$$\cancel{=\frac{1}{2}\left(Y_0+E_k^2\right)+\sum_{n=1}^{\infty}Y_{nS}\cos\left(nS\varphi+y_{nS}\right)}$$

$$\cancel{+2E_0E_k\cos(k\varphi+\gamma_k)+\frac{1}{2}E_k{}^2\cos 2(k\varphi+\gamma_k)}$$

$$\cancel{+E_k\sum_{n=1}^{\infty}E_n\left[\cos\{(nS+k)\varphi+\varepsilon_n+\gamma_k\}+\cos\{(nS-k)\varphi+\varepsilon_n-\gamma_k\}\right] \qquad (5)}$$

$$\underline{A(\varphi)=\left\{E_0+\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\right\}^2}$$

$$\underline{+2\left\{E_0+\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\right\}E_k\cos(k\varphi+\gamma_k)}$$

$$\underline{+E_k{}^2\cos^2(k\varphi+\gamma_k)}$$

$$\underline{=Y_0/2+\sum_{m=1}^{\infty}Y_{mS}\cos(mS\varphi+y_{mS})}$$

$$\underline{+2E_0E_k\cos(k\varphi+\gamma_k)}$$

$$\underline{+2E_k\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\cos(k\varphi+\gamma_k)}$$

$$\underline{+E_k{}^2\cos^2(k\varphi+\gamma_k)}$$

$$\underline{=\frac{1}{2}(Y_0+E_k{}^2)+\sum_{m=1}^{\infty}Y_{mS}\cos(mS\varphi+y_{mS})}$$

$$\underline{+2E_0E_k\cos(k\varphi+\gamma_k)+\frac{1}{2}E_k{}^2\cos 2(k\varphi+\gamma_k)}$$

$$\underline{+E_k\sum_{m=1}^{\infty}E_m\left[\cos\{(mS+k)\varphi+\varepsilon_m+\gamma_k\}+\cos\{(mS-k)\varphi+\varepsilon_m-\gamma_k\}\right] \qquad (5)}$$

At page 16 replace the equation in line 1 with:

$$\cancel{\left\{E_0+\sum_{n=1}^{\infty}E_n\cos\left(nS\varphi+\varepsilon_n\right)\right\}^2=Y_0/2+\sum_{n=1}^{\infty}Y_{nS}\cos\left(nS\varphi+y_{nS}\right)}$$

$$\underline{\left\{E_0+\sum_{m=1}^{\infty}E_m\cos\left(mS\varphi+\varepsilon_m\right)\right\}^2=Y_0/2+\sum_{m=1}^{\infty}Y_{mS}\cos\left(mS\varphi+y_{mS}\right) \quad (6)}$$

At page 16 replace paragraph [0052] with:

By the same consideration as given above:

A. By the third term in equation 5, equation 3, and equation 6, when k = nP, a cogging torque of the nP-th (the number of poles) component occurs.

B. Here, regarding the fourth term in~~-equation5~~ <u>equation 5</u>, when pulses of the armature function (the permeance) that occur due to the irregularity of the frame thickness are assumed to be smaller than the fundamental wave components (E_1), etc. of the armature function, E_k can be assumed to be neglected.

C. By the fifth term in equation 5, equation 3, and equation 6, when nP = ~~nS~~<u>mS</u> + k or nP = | ~~nS~~<u>mS</u> - k |, that is, when k = | nP - mS | and k = nP + mS, cogging torque of the nP-th component occurs.